

Maria S Merian 0204 (04 February 2020)

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1. Objective

Leave the cold/freshwater filament survey area on a northwesterly course towards the Piarco airspace for the cloudkite to be launched. The triple shallow biology CTD station was done at 03:30 (timing critical). Cloudkite was launched in after lunch and shortly after surveyed many clouds present in the region. At 18:00 LT the cloudkite was recovered. A uCTD program is running along the track to the northwest. We discussed the option to be on the 5th Feb. at 18:50 on the projected GMP satellite swath.

2. Synoptic Situation

No report

3. Cruise-day Elements

Approx. Time (local)	Operation	Latitude	Longitude	Comm
	Heading north west			
03:30	CTD# 57 – Time critical!	At position		600m
	CTD# 58	same pos.		200m
	CTD# 59	same pos.		350m
	Heading north west No dedicated observations			12.5 kn
13:00	Information: Enter Piarco Airspace	9°06'N	55°39'W	
13:05	Cloudkite launch			
14:00	Cloudkite survey Operating North of Guyana EEZ for logistical reasons "Into clouds" courses Use of uCTD (60nm+)	10°10.50'N	55°27.90'W	8kn
18:00	Recovery of cloudkite			
21:00	Steam northwest Use of uCTD	12°05.00'N	57° 05.00'W	8kn

Inter-calibration: with lAtalante

CTD Stations: see table

Overflights: no

4. Instrument Status

Operational:

Ocean – ADCP 38 & 75kHz; TSG; X-Band Radar; Underway O2, Chl-a (spectrometer); Incubation (PP; filtration); Nutrient/lab analysis; CTD/O2 +rosette; Moving vessel profiler; Microstructure sonde; Ferrybox pCO2; MIMS (O2/Ar, DSMS), underway CTD

Glider ifm09; ifm 03; ifm12 (see <https://gliderweb.geomar.de/> -> swarm 12;

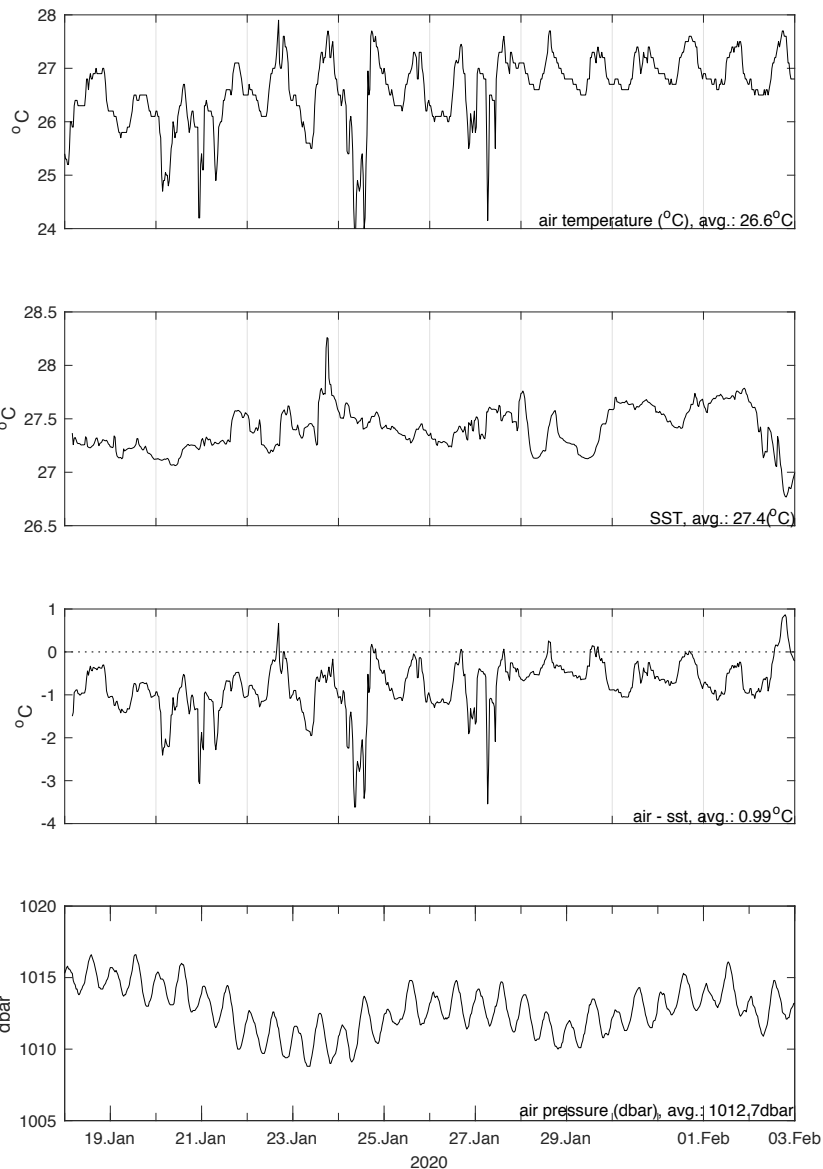
Atmosphere – Halo Wind Lidar; Disdrometer; W-Band Radar. MRR (rain), sun photometer, Cloudcamera; SMPS (Aerosol; ship based); radiosondes; DWD Metrology package (incl. radiation); ARTHUS Raman Lidar; Splash drone (atmospheric state parameters); – MPCK+ (atmospheric state parameters+cloud microphysics; Cloudkite); Mini MPCK (atmospheric state parameters and fluxes; Cloudkite); SMPS (Aerosol; Cloudkite)

No functioning: Ceilometer

5. Outlook

Continue sampling toward the west. Launch Cloudkite and acquire data. Change to MVP when approaching eventually an eddy. Start preparing for demobilization (paperwork).

6. Figures



Underway data – air temperature, sea surface temperatur (intake at 6.5m), difference air temp.- SST, air pressure